



Earth Science Operating Missions 2013 Senior Review Kickoff Mission Team Q&A

December 4, 2012

AGU 2012 Fall Meeting
San Francisco Marriott Union Square, Sutter Room, 5-7pm PST
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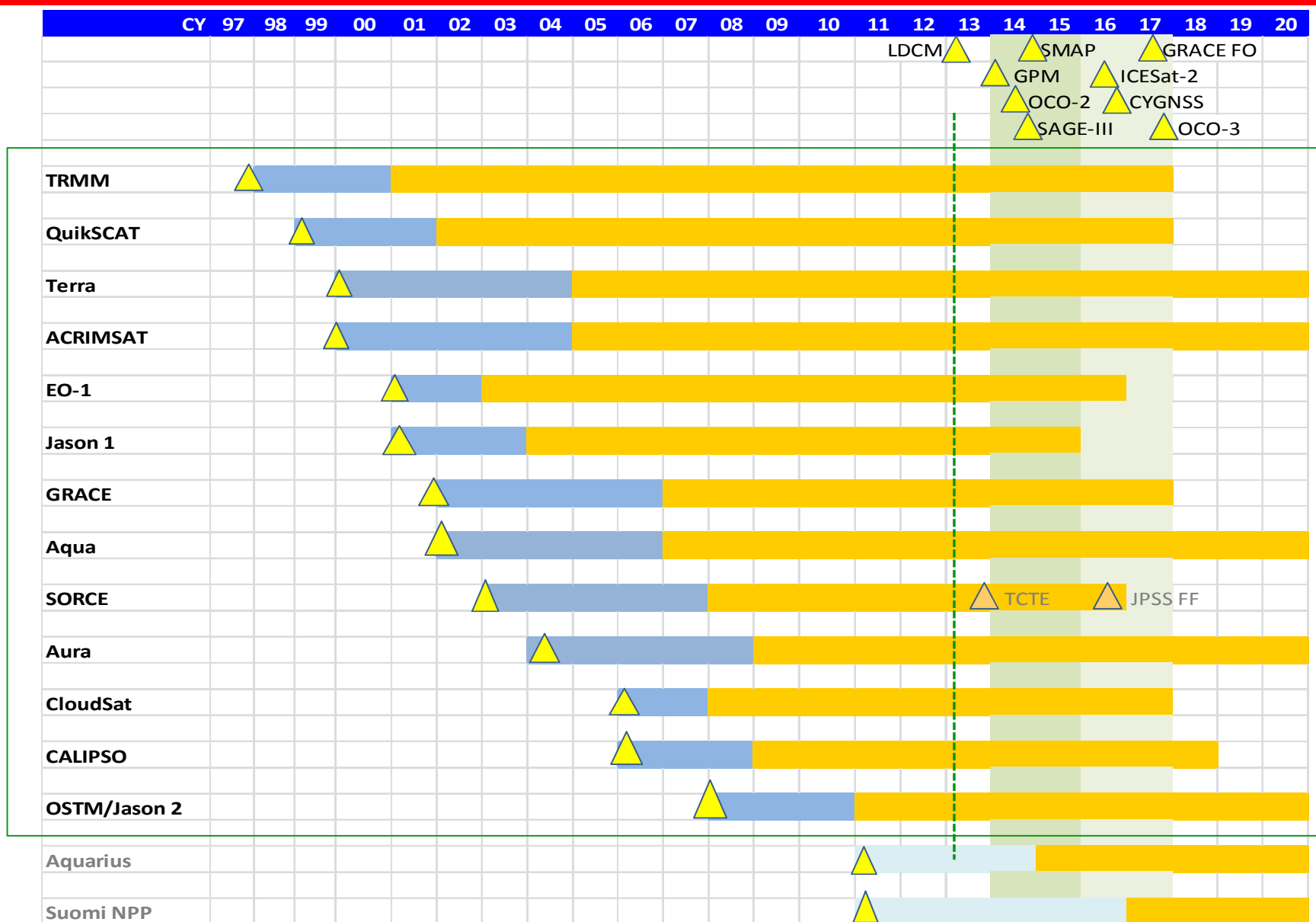


Senior Review Objective

- Within available resources, maximize science value of the ESD on-orbit observing assets, while recognizing contribution to National (non-research) goals.
- The ESD Senior Review explicitly acknowledges
 - the importance of long term data sets and overall data continuity for Earth science research;
 - the direct contributions of mission data to national objectives, such as the routine use of near-real-time products from NASA research missions for applied and operational purposes by U.S. public or private organizations



ESD On-Orbit Assets

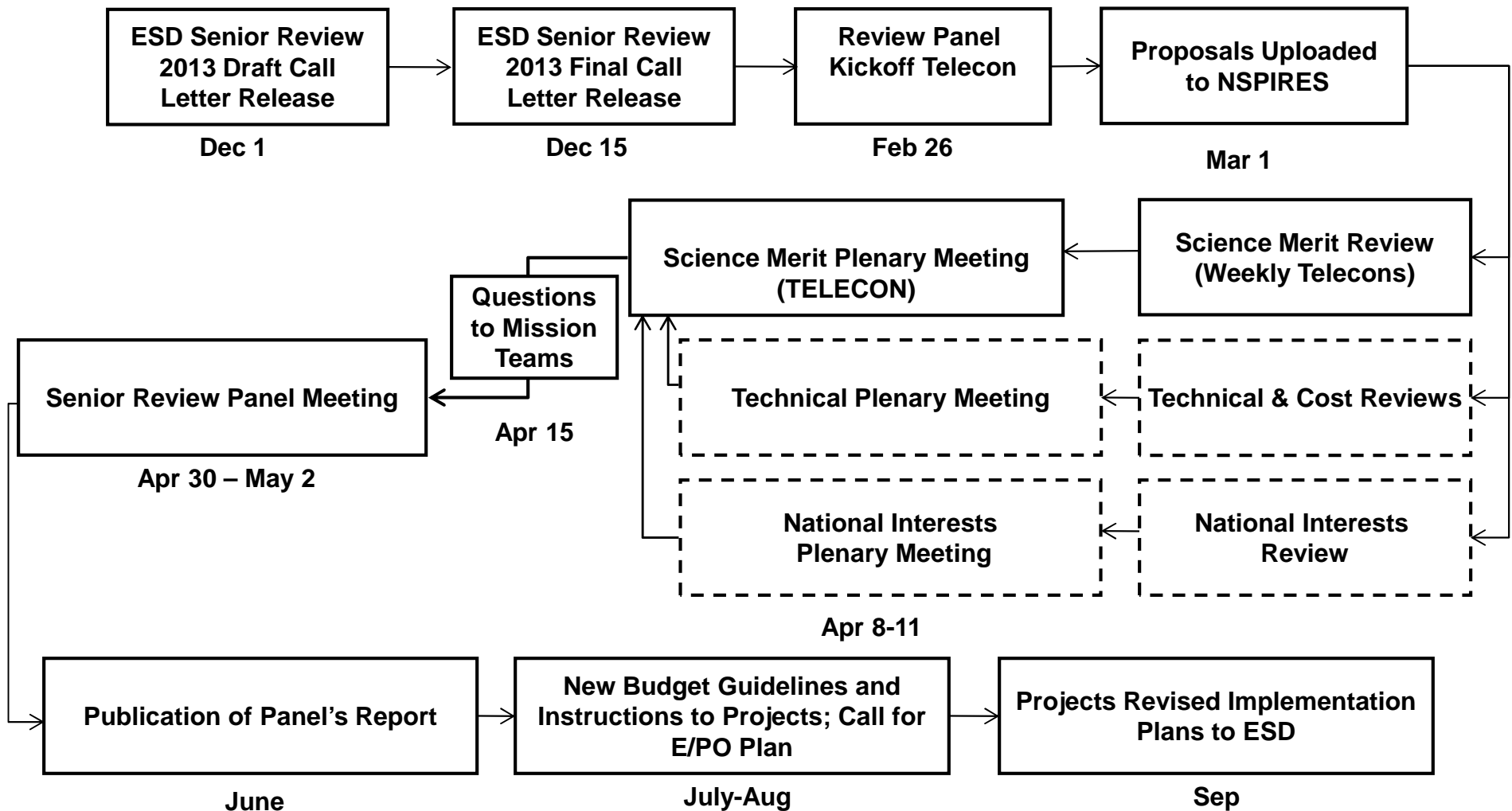




Senior Review Schedule

- Schedule
 - Draft Call Letter Dec 1
 - Mission Scientist Pre-Proposal Briefing Dec 4
 - Final Call Letter Dec 15
 - Proposals Due Mar 1
 - National Interests Panel and Technical Review Apr 8-11
 - Science Panel (Telecon) Apr 12
 - Science Panel (Mission Presentations) Apr 30 – May 2
 - Science Panel Preliminary Findings to ESD May 3
 - Science Panel Report June
 - PPBE2013/Senior Review Budget Decisions May – Jul
 - Program Scientist Review & E/PO Call July
 - Results to ESD Steering Committee Aug
 - Guidance Letters to Missions Aug
 - Mission Response Sep 30

ESD Senior Review 2013 Flow





Process Improvement

- **What stays the same**
 - Focus on core mission
 - Each mission has an assigned Lead Reviewer with 2 secondary reviewers; assures that all proposals are comprehensively read & reviewed by at least 3 panelists and **all** panelists are briefed & familiar with content, strengths & weaknesses before the mission team presentations.
 - Mission presentations will address the questions & topics for clarification requested by the Panel, not a general presentation of proposal content.
 - Chairmanship of National Interests panel by Applied Sciences with panel members from other agencies, states, and non-governmental organizations.
 - Continue technical sub-panel.



Process Improvement

- **Modifications/Improvements**

- Cost ratings were of minimal value in last 2 reviews; cost analysts will read proposals & form opinions, but primarily be a resource to panel during evaluations, to perform analyses such as comparisons of historical costs with proposed costs, MO vs DA, etc.
- The budget template has been updated to add a content listing with workforce.
- Program Scientist Role is being clarified, and all program scientists will receive an orientation briefing on role and opportunities to participate.
 - Pre-review: help to establish priorities and scope during Steering Committees
 - Proposal writing: resource to mission teams on priorities, etc.
 - During Panel Reviews: Ex officio panel member for assigned missions with a seat at the table during the April telecon & May presentations.
 - Post-review decisions: help formulate specific guidance to missions based on panel findings, participate in final decision-making Steering Committee in August.
- More background briefings to Science Panel:
 - Mission timelines, showing future mission plans & dataset continuity.
 - Description of the MO & DA vs. MMO vs. Competed Science program structure
- Panel will not be asked to evaluate individual data products, but provide an overall value assessment of the suite of data products.



Review Panel Structure

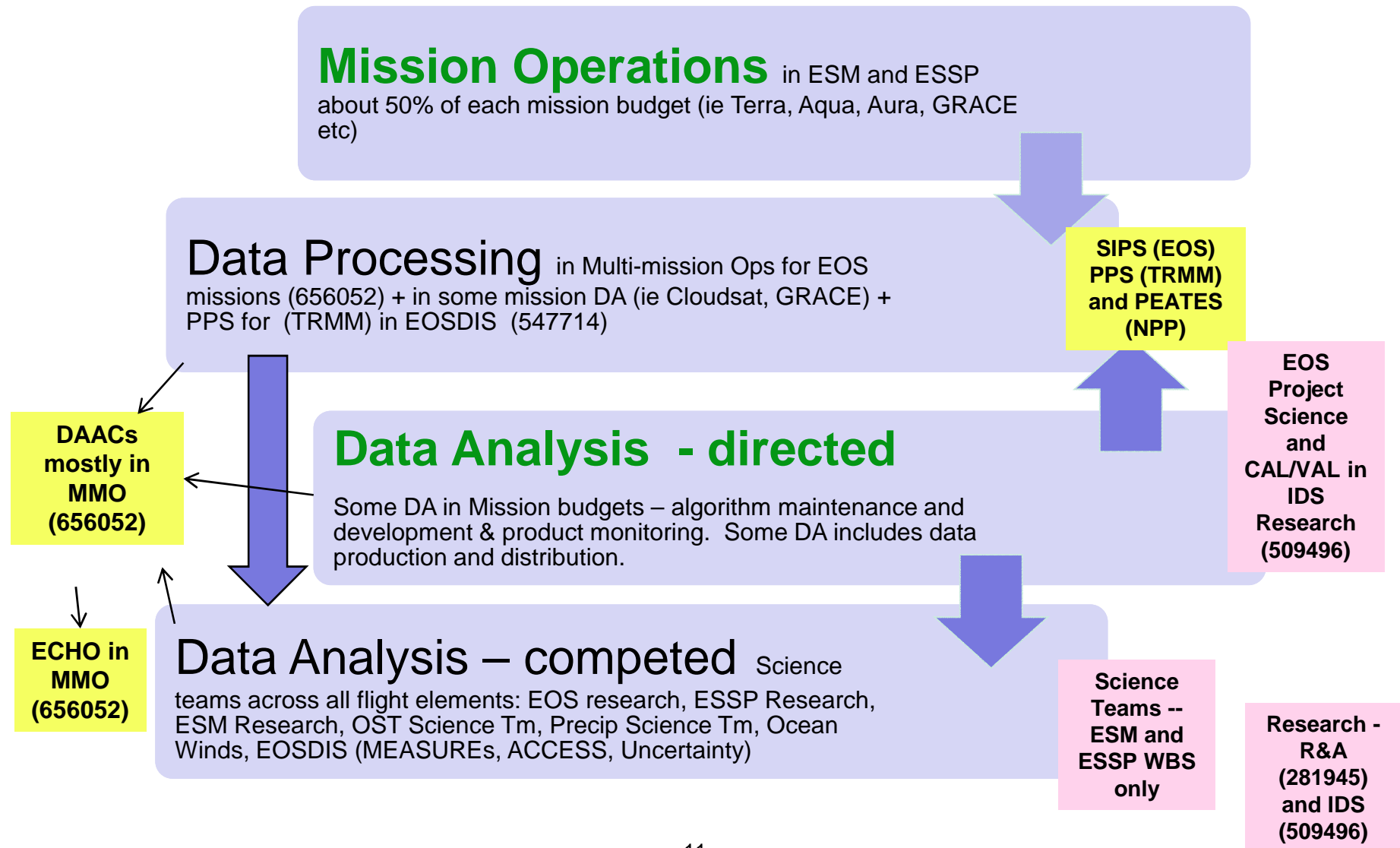
- **Science Panel** (12-14 members)
 - Primary evaluation panel
 - Chaired by a 2011 panel member
 - All Science Focus Areas & ESD disciplines (e.g. cryosphere, oceans...) will be represented.
 - Members will be recognized experts from the Earth science community; diversity essential.
 - Will be supported by Technical SubPanel, led by LaRC SOMA, who will brief findings to the Science Panel & deliver a written report.
 - Will be supported by Program Office program analysts to provide cost analyses.
- **National Interests Panel**
 - Chaired by ESD Applied Sciences
 - Seek input on applied & operational uses from
 - Civilian agencies: NOAA, USDA, FAA, DOI/USGS, EPA
 - Military/security: NRL, AFWRL, DHS, NRO, NGIA
 - States/NGO/Private Sector: ASPRS, Conservation International, National States Geographic Information Council, AIAA Remote Sensing Working Group
 - Will brief findings to the Science Panel & deliver written report.



2013 Senior Review Scope



Program Structure – Elements and WBS





2013 ESD Senior Review Missions

Mission	Launch	Phase	Extension to	2011 Senior Review Extension Endorsed	Design Life (yr)	Current Life (Yr)	Expected Last Year of Operation	Risk of Failure by 2015 (Senior Rev 2011)
TRMM	11/27/1997	Extended	9/30/2011	9/30/2015	3	15.0	2016	High
QuikSCAT	6/19/1999	Extended	9/30/2011	9/30/2015	3	13.5	2015	High
Terra	12/18/1999	Extended	9/30/2011	9/30/2015	5	13.0	2017	Medium
ACRIMSat	12/20/1999	Extended	9/30/2011	N/A	5	13.0	2020	N/A
NMP EO-1	11/21/2000	Extended	9/30/2011	9/30/2015	1.5	12.0	2015	High
Jason	12/7/2001	Extended	9/30/2011	9/30/2015	5	11.0	2014	Medium-High
GRACE	3/17/2002	Extended	9/30/2011	9/30/2015	5	10.7	2016	Medium-High
Aqua	5/3/2002	Extended	9/30/2011	9/30/2015	5	10.6	2022	Medium
SORCE	1/25/2003	Extended	9/30/2011	9/30/2015	5	9.9	2015	Medium-High
Aura	7/15/2004	Extended	9/30/2011	9/30/2015	5	8.4	2018	Medium-High
Cloudsat	4/28/2006	Extended	9/30/2011	9/30/2015	3	6.6	2015	Medium
CALIPSO	4/28/2006	Extended	9/30/2011	9/30/2015	3	6.6	2016	Medium-Low
OSTM	6/20/2008	Extended	9/30/2015	9/30/2015	5	4.4	2018	Low

- 2013 review covers the budget years 2014-2018.
- ACRIMSAT returned to Senior Review process, due to loss of Glory.
- Aquarius prime mission ends early FY15; an extension will be granted in PPBE guidance, confirmed in End of Prime Mission review; and they will propose to the 2015 Senior Review.



Evaluation Criteria

- **Science:**
 - Scientific merit of the mission datasets, based on their intrinsic value in research investigations by the community, relevance to ESD science goals, and data product maturity;
 - Quality **trends** of the data products, value of long term data records and overall data continuity, and projected quality based on continuing mission performance, including any degradation of sensor or platform;
 - Secondary criteria:
 - Utility for National Interests
 - Cost reasonableness
- **Operational and non-research uses:**
 - Utility of the products for “applied and operational uses” that serve national interests, including: operational uses, public services, business and economic uses, military operations, government management, policy making, non-governmental organizations’ uses, etc.
 - Evaluation factors: intrinsic value, frequency of use, latency.
- **Technical & Cost:**
 - Hardware status and performance, life expectancy.
 - Mission operations plans for health, safety and data collection.
 - Cost realism.

ESD’s priority for the Mission Teams for the 2013 Review

➤ *Quality datasets that support scientific use and research.*



2013 ESD Senior Review Missions – Funding Environment (1)

- Pool of funds available is the sum of all the missions' MO&DA, decreased by the assumption that the following missions will begin to fail, one by one, until all are non-operational by 2018:
 - CloudSat, EO-1, GRACE, Jason-1, QuikSCAT, and SORCE
 - ESD intends not to terminate any mission still providing valuable datasets.
 - Continuing operations of these missions are consequently a lien on ESD's budget, beginning in FY14.
- National budget uncertainties: although we try to hold to the budgets allocated in the Senior Review process, Executive and Legislative Branch budget actions cause changes annually. Do NOT assume that today's baseline is the same as what as allocated in the last Senior Review guidance letter.



2013 ESD Senior Review Missions – Funding Environment (2)

- Guideline Proposals Required
 - Missions NOT designated as ‘dying missions’ must submit in-guideline proposals that match the current Agency budget baseline.
 - “Dying missions” will be issued a target baseline, and must submit proposals that match these targets.
- ‘Optimal’ Proposals allowed only for ‘sustainable’ scenarios
 - No new scope (no new products, investigations, etc)
 - Optimal proposals will be accepted only if you can demonstrate that the provided baseline requires de-scopes that make the entire mission not worth continuing.
 - Technical narrative must describe the discrete activity or item enabled by the additional funding, and the benefits of the additional work.
- PPBE2015 budget submissions MUST MATCH your Senior Review proposals.
 - “Dying missions” must all submit ‘overguides’ in the PPBE2015 that will match the target guideline/submission in the Senior Review proposal.



Call Letter Outline

- Objectives
- Panels
- Review Criteria/Instructions to the Panel
- Extended Mission Scope
- Funding Environment
- Instructions to Proposers
 - Science Section: science merit, data products, applied & operational use, programmatic elements.
 - Technical/Budget Section: technical status (inc. technical data appendix) & mission operations, budget narrative (inc. mandatory forms).
- Appendices & Attachments
- Proposal Submission
- Panel meetings
- Presentations to Panel
- After Panel Meets
- Schedule
- Further Information & Attachments (e.g. WBS dictionary, budget template)



Changes since the 2011 Review

- Senior Review Panel will not be asked to do a product-by-product assessment of the standard data products, but an overall valuation of the suite of mission datasets.
- Other changes are minor:
 - Appendix E (technical & engineering data) no longer optional; it is required.
 - Table added to the budget template for a content listing to supplement the budget narrative.
 - ID fund source (ROSES or Mission DA) for each product in Appendix A (Data Product inventory).
 - Flagship missions proposal length decreased to 30pp, per project input.
 - Proposal submission will use NSPIRES instead of Scienceworks.



Requested Feedback

- Are the evaluation criteria clear?
- Where is more clarity needed in the Call Letter?
- Suggestions for additional process improvements?
- QUESTIONS & COMMENTS

***For More Information & Comments:
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